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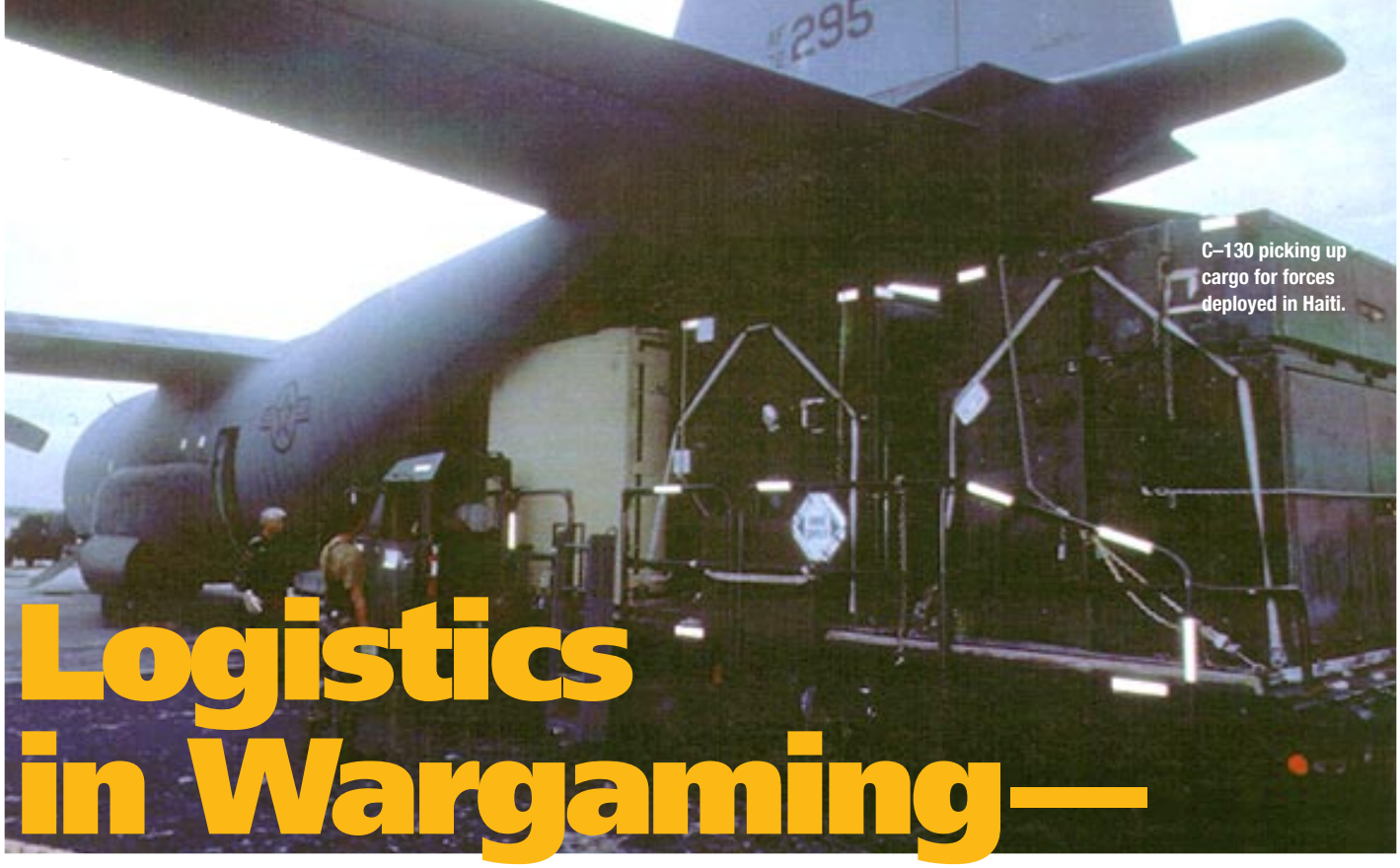

C–130 picking up cargo for forces deployed in Haiti.

Combat Camera Imagery (Frank Oplanic)

Logistics in Wargaming—An Initial Report

By JOHN B. LAPLANTE, DAVID P. GARNER, *and* PATRICIA INSLEY HUTZLER

The Joint Staff has been concerned about analyzing logistics capabilities in an operational context for some time. Two recent events deepened that concern. First, the Secretary of Defense charged the Chairman with carrying out wargames to validate the two nearly simultaneous major regional conflict (MRC) strategy using the *Bottom-Up Review* update force structure. Second, he called for realistic evaluations in support of the joint warfighting capabilities assessment (JWCA) process. This led to the adoption of gaming as a means of undertaking joint assessments of critical logistics issues. Wargames are unique, low-cost ways to examine issues in an operational setting.

warfighters have come to see logistics in an operational context

Logistics analyses are often conducted without the participation of warfighters. Moreover, logistics is normally seen as an operational constraint in wargames. As a result, wargames tend to avoid focusing on how the presence—or absence—of logistic support affects campaign planning. Wargaming models largely ignore the logistic impact on operations, making it difficult to quantify specific logistic needs, support requirements for meeting those needs, and evaluate the implications of not meeting them. In most cases experts qualitatively assess possible constraints on operations.

In the past year the incorporation of logistics as an integral part of wargames has improved communication between warfighters and logisticians. The former have gained an appreciation of the critical role of logistics in operations and the latter have come to see logistics in an operational context. Now, at the conclusion of many games, the representatives of regional CINCs characterize constraints on logistics as *operational* rather than narrow *logistics* issues.

Developing a Strategy

Using wargames to assess logistics required a strategy. Global '94, a game conducted at the Naval War College, introduced us as logisticians to the joint wargaming environment and also served as the testbed for developing a strategy. Based on wargames in the last year, this strategy

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Joint Staff to assess near- and mid-term capabilities to win two nearly simultaneous MRCs against forecasted threats. The game illustrated the benefits of pre-game coordination between the Joint Staff and services. It was a watershed for understanding both the capabilities and limitations of theater-level campaign analysis, especially logistics assessments. Nimble Dancer '95 indicated the direction that modeling must take to integrate logistics in theater-level analyses and highlighted strategic mobility, adequacy of support forces, and the apportionment of preferred munitions.

Naval Ordnance Game (ORDWAR)—This game was the first to focus on ordnance as well as related logistics issues. Co-sponsored by the Navy and Marine Corps, ORDWAR assessed one MRC set in 1995 and then expanded to a two-MRC scenario. In addition to combat consumption, it addressed outload, transportation, industrial base, maintenance, and regeneration of ordnance, as well as command and control. ORDWAR also stressed entwining Navy and Marine requirements and capabilities with those of the other services, for example, using common facilities for in-theater reception and onward movement of munitions. The requirement for greater participation by the munitions community in TPFDD development was one of the major outcomes.

Naval Total Force '94 (TF–94)—This game focused on readiness, availability, adequacy, and accessibility of the Reserve, and the capabilities of the naval force structure to meet two-MRC requirements. TF–94 sought to develop a model for Selected Reserve readiness categories based on expected call-up times, address the Secretary of the Navy's Naval Reserve issues, review roles and missions, and play the Naval Reserve master mobilization plan. A major accomplishment of TF–94 was developing a means for categorizing Reserve units to flag activation requirements and designate unit readiness goals. Moreover, it expanded the definition of enabling forces to include deploying forces with responsibilities other than for movement and reception of forces.

Cobra being loaded aboard *USS Capella* after Desert Storm.

U.S. Army (Robert Reeve)

***USS Tripoli* being refueled by *USS Sacramento* off Somalia.**

Combat Camera Imagery (Jeff Brady)

instances where the models support logistics issues—such as munitions consumption—the operative assumptions and variables inherent in the model are not apparent. Thus, model results require careful analysis and interpretation to furnish meaningful support in games. Professional judgment by subject area experts provides the critical qualitative assessments needed to complement model results.

Data requirements and turnaround time often limit models in gaming. Many models used in campaign analysis are resource-intensive, requiring extensive preparation for each run. Moreover, they can provide details on the conduct of campaigns. These characteristics emphasize pre-game modeling runs and severely restrict excursions in real games. But improvements have been made and, as a result, models for Global '95 supported two moves a day. Nonetheless, much remains to be done on model development to increase the value gained for logisticians from gaming.

Variations among wargames limit the ability to replicate results. Each addresses particular concerns. They are expensive, so duplication must be managed. Varied timeframes, objectives, and organization contribute to their unique character. In addition, the dynamic nature of wargames where players influence the conduct of a campaign limit the ability to compare the results of games. From an assessment perspective, we must treat each match as an individual data point rather than as providing a complete answer. However, a string of similar data points results in a trend; and soon a possible impact of an issue on operations becomes clearer, as does the likely solution.

A recurring problem has been a lack of synchronization among wargames. As mentioned, varied timeframes, objectives, and purposes make it difficult to achieve consistent results, although a greater harmonization is being realized. Recently, the scenario of two nearly simultaneous MRCs has become the standard gaming scenario, with excursions done primarily with regard to location, size, and timing of associated OOTWs. Last year the naval series as well as Global '95 were set in 2003. Each iteration of a standard scenario contributes to our understanding of logistics problems.

Joint participation varies. We are at the embryonic stage in assessing logistics issues from a joint perspective. Many issues are analyzed using a stovepipe approach. Linkages among issues are not clearly identified. Joint requirements are not solidly established and complementary service capabilities are not being maximized. Nonetheless, we are aware of these shortfalls. In an era of dwindling resources, a combined, integrated effort is necessary to support the warfighter.

Keys to Success

One major lesson has been to identify, describe, and analyze issues before a game, and to do it early. Because it is imperative that CINCs, services, and Joint Staff fully participate, new management tools have been developed. Central among them is the joint monthly readiness review to identify logistics readiness concerns of CINCs and examine service budgets and FYDP issues.

Include joint and coalition support issues. Wargaming can increase knowledge of common sourcing and employment of logistics as a force multiplier. This requires an expanded use of joint logistics capabilities. Moreover, it means considering the logistics impact on coalition partners in terms of requirements and potential support. This is important in depicting implications of host nation support in games. An improved means of analyzing joint and coalition requirements is needed.

Involve general and flag officers. To focus staff performance, especially in the pre-game phase, continuous participation by senior leaders is critical. Flag-officer IPRs, as conducted in the Naval Logistics Game, are very effective. While this process requires a considerable investment of time, the benefits of flag officer involvement have been demonstrated. At a minimum, periodic flag-level briefings are needed to apprise senior leaders of the relevant issues and their status.

Develop effective logistics models and data bases. The weakness in gaming—particularly logistics—is modeling and simulation. Models and data bases that produce quantifiable results at useful levels of detail are key to improving consideration of logistics in campaign-level analysis. Many defense analysts are currently embarked on ambitious efforts to develop the next generation of joint campaign-level models. Representing logistics impacts will be part of this capability.

The success of wargaming logistics has influenced the Chairman's Program Assessment by working through logistic operational issues in a scenario-based assessment. It has also significantly improved dialogue among joint logisticians, developed a process for including logistics issues in wargames, and expanded attention to such issues through new management mechanisms. Although gaming has genuine limitations, it offers valuable insights to the joint logistics and operations communities. We have a sound basis on which to build relationships that will continue to grow. JFQ